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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,784	02/28/2002	Tommy Mack Davis	38,816	8988
7590 03/15/2004			EXAMINER	
Ted M. Anthony Perret Doise, APLC Post Office Drawer 3408 Lafayette, LA 70502			BARRY, CHESTER T	
			ART UNIT	PAPER NUMBER
			1724	
DATE MAILED: 03/15/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/086,784

**Applicant(s)**

DAVIS ET AL.

**Examiner**

Chester T. Barry

**Art Unit**

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.  
4a) Of the above claim(s) 9-28 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-8 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 22 February 2002 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/28/02, 10/20/03.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

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Applicant's election without traverse is noted. Applicant should cancel the withdrawn, non-elected claims in response to this Office action. The examiner will not exercise his discretion to do so by examiner's amendment should this case be allowable but for the presence of withdrawn claims non-elected without traverse in the application.

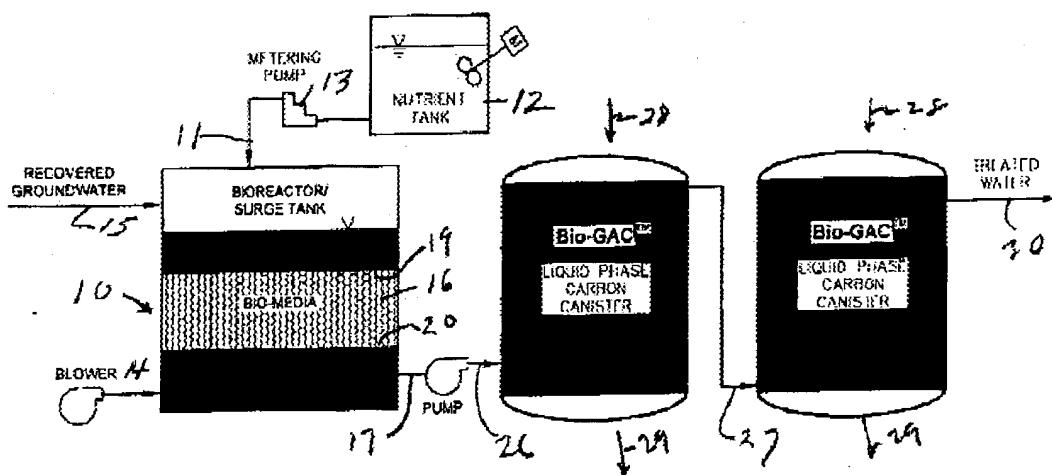
US patent application publication 20030136734 A1 from Mirzayi describes a method of treating waste supported in a liquid comprising:

Inoculating a carrier media 16 with one or more microbial populations;

Placing said inoculated carrier media within a porous container 10;<sup>1</sup>

Supplying at least one nutrient to said one or more microbial populations; and

Supplying oxygen (via blower 14) to said porous container and said one or more microbial populations. The patent does not describe or suggest immersing the porous container in said waste supporting liquid.



<sup>1</sup> The container is "porous" because it has at least one inlet 15, 14, 11 and at least one outlet 17.

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US patent 5770079 to Haase describes a method of treating waste supported in a liquid comprising:

Inoculating a carrier media with one or more microbial populations;

Placing said inoculated carrier media within a porous container;

Supplying at least one nutrient to said one or more microbial populations (see abstract, i.e., "additives such as nitrogenous salts, phosphorus salts, buffers, surfactants, enzymes, and organic substrates); and

immersing the porous container in said waste supporting liquid (abstract, penultimate line).

Haase does not describe supplying oxygen to said porous container and said one or more microbial populations.

The scope of disclosure of USP 4810385 to Hater is similar to that of Haase, but suggests further that the biological sock be placed in a wet well (col 3 line 10) or in a "bioreactor or bacteria make up tank (aerated tank)." Col 3 line 46).

Accordingly, claims 1 – 7 are rejected under 35 USC Sec. 102(b) as anticipated by Hater. Claim 1 requires only that oxygen be supplied to the porous container. That oxygen may be supplied to the container by immersing the container in aerated waste, as disclosed by Hater. It does not require that an oxygen delivery mechanism, such as applicant's delivery conduit 14, 14b, 14c be placed within the confines of the container.

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An aerated liquid inherently contains bubbles diffusing through the liquid. These diffusing bubbles would necessarily further or advance the spreading of bacteria leaving the Hater porous container.

Claim 8 is rejected under 35 USC Sec. 103(a) as obvious over Hater, as applied to claims 5 and 7 above, further in view of USP 3998714 to Armstrong. Armstrong teaches wet well aeration for improved water pollution suppression. See Armstrong column 28. Therefore, it would have been obvious to have placed Hater's porous bioreactor in Armstrong's aerated wet well for reasons that Hater gives for using his bioreactor in wet wells generally. Alternatively, it would have been obvious to have aerated the wet well in which Hater describes placing the porous bioreactor in order to suppress water pollution, as taught by Armstrong.

Claims 1, 3, 4, are rejected under 35 USC Sec. 102(b) as anticipated by USP 5507950. The patent shows a porous container because it has an inlet, an outlet, and an open bottom. Air diffuser 9 generates bubbles that diffuse the microbes. The container is immersed if not submersed in the waste water.



CHESTERT T. BARRY  
PRIMARY EXAMINER

3/6/04